city of Ankeny

bringing it all together

WELCOME

ANKENY AREA CONTRACTORS

Thank you for being here today!

IECC 2012 Residential Energy code update

Statewide Code Effective June 1st 2014

Introduction

Brian Bishop

Construction/ Design Engineer

Iowa State Fire Marshal's Office

Building Code Bureau

Summary – International Energy Conservation Code (IECC 2012)

- Residential Change Summary for the IECC 2012
  - Iowa Change: Cavity only R20 option and R13+R5 continuous in both climate zones
  - Iowa Change: Mandatory whole-house pressure test to 4 ACH 50
  - Iowa Change: Duct sealing pressure test requirements
  - Iowa Change: No building cavities used as supply, returns if sealed and tested
  - Domestic Hot Water distribution system requirements
  - Makes lighting requirements “mandatory”
  - March 2014- May 31, 2014 – Use of 2009 IECC or 2012 IECC
  - Fully Effective - June 1st 2014

CHAPTER 303
STATE BUILDING CODE—REQUIREMENTS FOR ENERGY CONSERVATION IN CONSTRUCTION

[Prior to 12/21/05, see rules 661—16.800(103A) to 661—16.802(103A)]

661—303.1(103A) Scope and applicability of energy conservation requirements.

303.1(1) *Scope.* Rules 661—303.1(103A) through 303.3(103A) establish thermal energy efficiency standards for the design of new buildings and structures or portions thereof, additions to existing buildings, and renovation and remodeling of existing buildings, except for residential buildings of one or two dwelling units, which are intended for human occupancy and which are heated or cooled by regulating their exterior envelopes and selection of their heating, ventilation, and air-conditioning systems, service water heating systems and equipment for the efficient use of energy, and lighting efficiency standards for buildings intended for human occupancy which are lighted.

303.1(2) *Applicability.* Rules 661—303.1(103A) through 661—303.3(103A) apply to design and construction of buildings which are intended for human occupancy throughout the state of Iowa. Any construction of buildings or facilities which are intended for human occupancy and which are heated or cooled is covered, with the exception of renovation and remodeling of residential buildings of one or two dwelling units, which are not covered. Rule 661—303.2(103A) establishes standards for design and construction of residential buildings of three or fewer stories. Rule 661—303.3(103A) establishes standards for design and construction of commercial buildings and residential buildings of four or more stories. The occupancy of any building covered by this chapter shall be determined based upon the occupancy definitions in chapter 3 of the International Building Code, 2006 edition.

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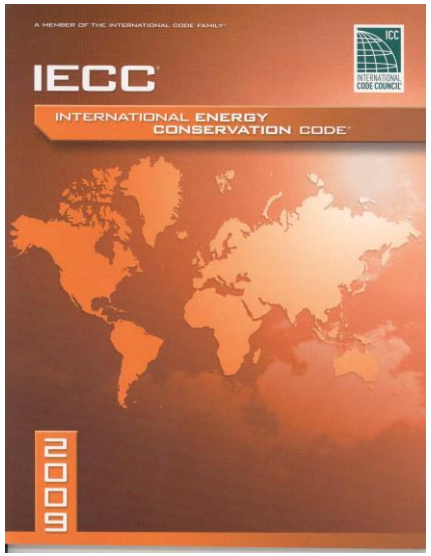
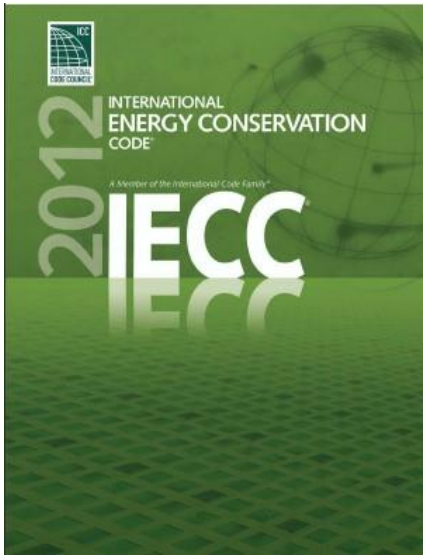
Resources

www.energycodes.gov

www.iccsafe.org

Published by: International Codes Council





Structure of the 2012 IECC

Commercial Section

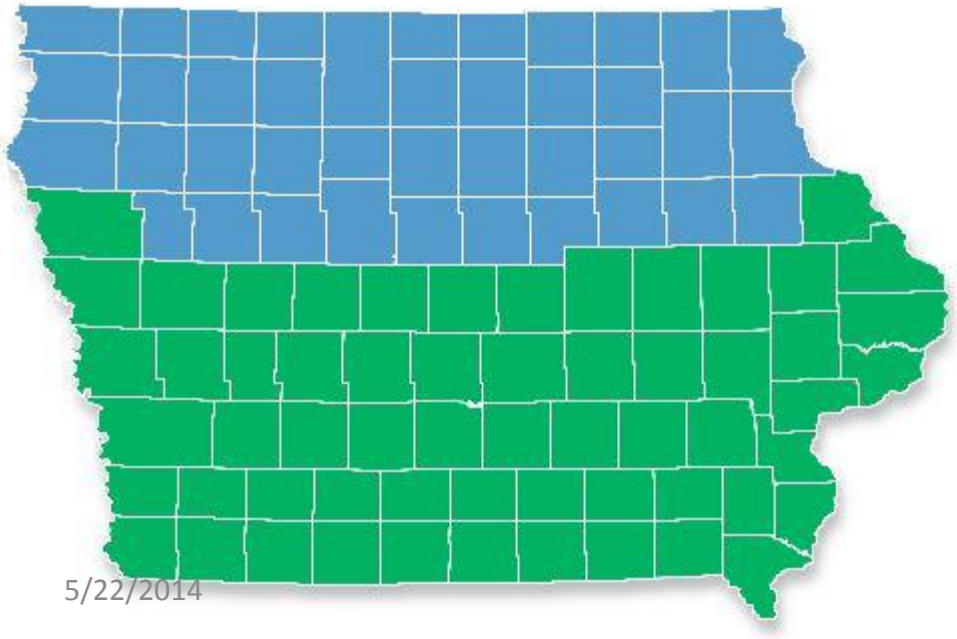
C101	Scope and Application / Administrative and Enforcement
C201	Definitions
C301	General Requirements
C401	Commercial Energy Efficiency
C501	Referenced Standards
	Index

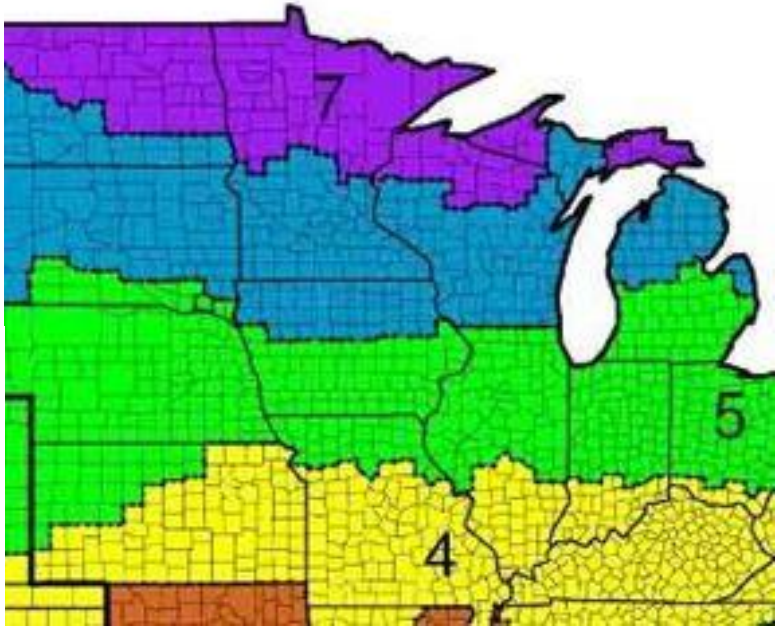
Residential Section

R101	Scope and Application / Administrative and Enforcement
R201	Definitions
R301	General Requirements
R401	Residential Energy Efficiency
R501	Referenced Standards
	Index

IECC Compliance - Two Climate Zones

- Iowa Has Two Climate Zones
  - Zone 5
  - Zone 6





IECC Compliance – Three Compliance Options

Prescriptive

R-values

Table R402.1.1

U-Factor and "UA" Alternatives

UA-factor

R402.1.3 - REScheck

Simulated Performance (software)

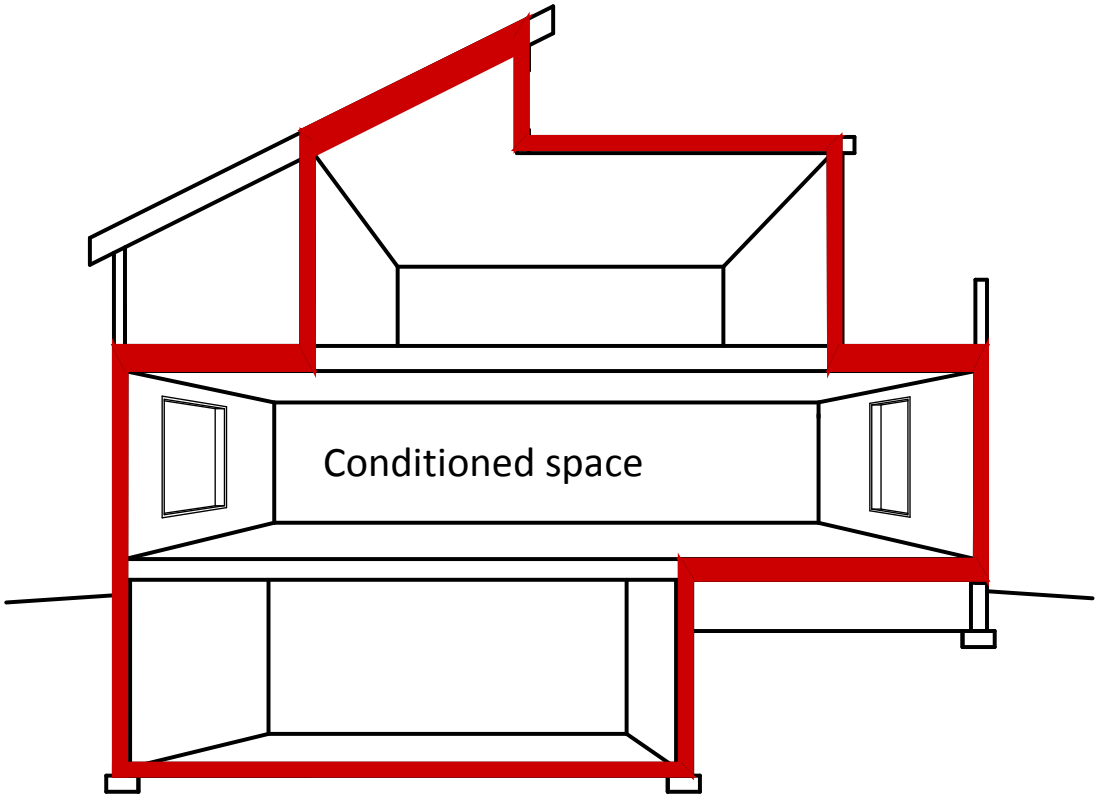
Simulated Performance Alternative

R405 - REMrate

- There are three paths of Compliance
  - Prescriptive
  - Trade-off
  - Performance

Building Envelope - Insulation and Fenestration

- Building Envelope consists of:
  - Fenestration
  - Ceilings
  - Walls
    - Above grade
    - Below grade
    - Mass walls
  - Floors
  - Slab
  - Crawl space



Residential Insulation and Fenestration Requirements by Climate Zone – Prescriptive Table

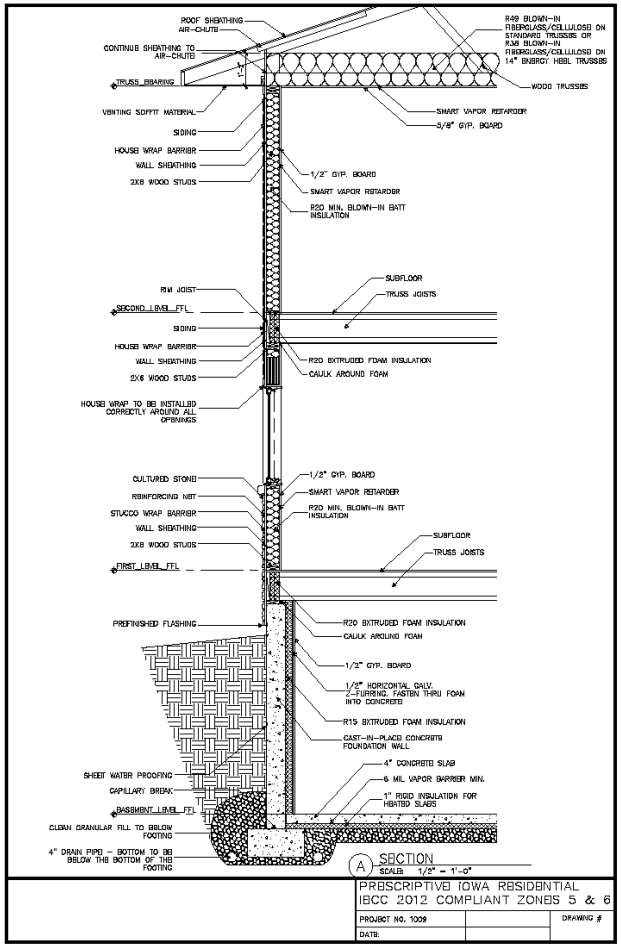
2009 IECC Table 402.1.1 Insulation and Fenestration Requirements by Component

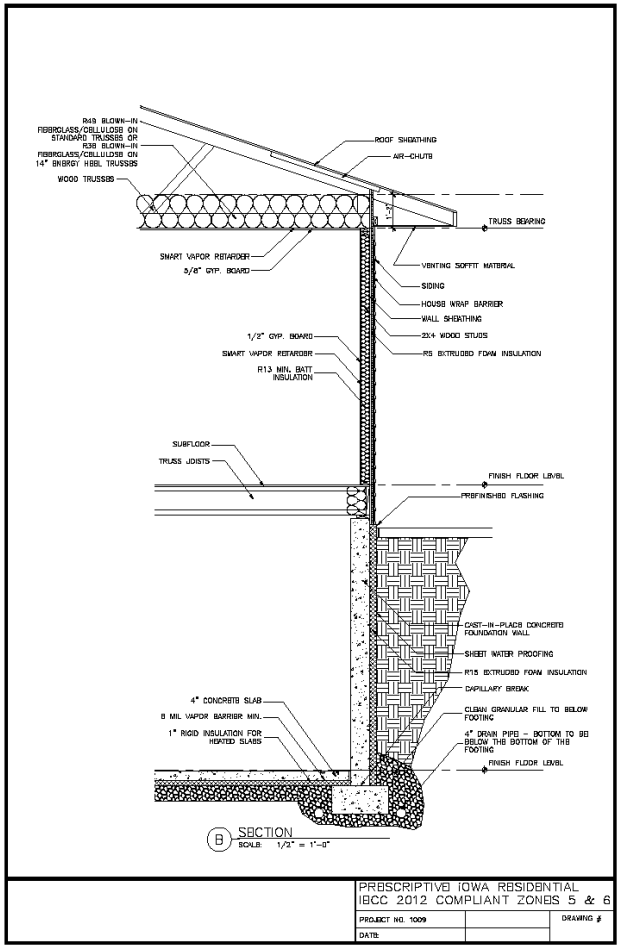
CLIMATE ZONE	FENESTRATION U-FACTOR[b]	SKYLIGHT[b] U-FACTOR	GLAZED FENESTRATION[b,e] SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE[i]	FLOOR R-VALUE	BASEMENT[c] WALL R-VALUE	SLAB[d] R-VALUE & DEPTH	CRAWL SPACE[c] WALL R-VALUE
1	1.20	0.75	0.30	30	13	3 / 4	13	0	0	0
2	0.65[j]	0.75	0.30	30	13	4 / 6	13	0	0	0
3	0.50[j]	0.65	0.30	30	13	5 / 8	19	5 / 13[f]	0	5 / 13
4 except Marine	0.35	0.60	NR	38	13	5 / 10	19	10 / 13	10, 2ft	10 / 13
5 and Marine 4	0.35	0.60	NR	38	20 or 13+5[h]	13 / 17	30[g]	10 / 13	10, 2 ft	10 / 13
6	0.35	0.60	NR	49	20 or 13+5[h]	15 / 19	30[g]	15 / 19	10, 4 ft	10 / 13
7 and 8	0.35	0.60	NR	49	21	19 / 21	38[g]	15 / 19	10, 4 ft	10 / 13

Iowa 2012 IECC Table R402.1.1 Insulation and Fenestration Requirements by Component

Climate Zone	*Fenestration U-Factor$_b$*	*Skylight U-Factor$_b$*	*Glazed Fenestration SHGC$_{b,e}$*	*Ceiling R-Value*	*Wood Frame Wall R-Value*	*Mass Wall R-Value$_i$*	*Floor R-Value*	*Basement Wall R-Value$_c$*	*Slab R-value & Depth$_d$*	*Crawl$_c$ Space Wall R-Value*
1	NR	.75	.25	30	13	3/4	13	0	0	0
2	.40	.65	.25	38	13	4/6	13	0	0	0
3	.35	.55	.25	38	20 or 13+5$_h$	8/13	19	5/13$_f$	0	5/13
4	.35	.55	.40	49	20 or 13+5$_h$	8/13	19	10/13	10, 2ft	10/13
5	.32	.55	NR	49	20 or 13+5$_h$	13/17	30$_g$	15/19	10, 2ft	15/19
6	.32	.55	NR	49	20 or 13+5$_h$	15/20	30$_g$	15/19	10, 4ft	15/19
7 & 8	.32	.55	NR	49	20+5 or 13+10$_h$	19/21	38$_g$	15/19	10, 4ft	15/19

Residential Insulation and Fenestration Requirements by Climate Zone – Prescriptive Table (Graphic)





Total UA Alternatives - Table R402.1.3 – Trade off

U-factor Alternative

- Similar to Prescriptive R-Value but uses U-factors instead
  - Allows for innovative or less common construction techniques such as structural insulated panels or advanced framing
  - Allows no trade-offs between building components

Total UA Alternative

- Same as U-factor alternative but allows trade-offs across all envelope components
  - Primary approach used in RES*check* software
  - UA – U factor x area of assembly

Total UA Alternatives - Table R402.1.3 – Trade off

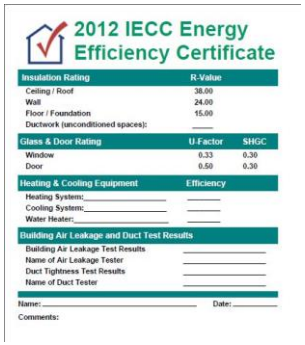
TABLE R402.1.3
EQUIVALENT *U*-FACTORS[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR	SKYLIGHT *U*-FACTOR	CEILING *U*-FACTOR	FRAME WALL *U*-FACTOR	MASS WALL *U*-FACTOR[b]	FLOOR *U*-FACTOR	BASEMENT WALL *U*-FACTOR	CRAWL SPACE WALL *U*-FACTOR
1	0.50	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.40	0.65	0.030	0.082	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.057	0.098	0.047	0.091[c]	0.136
4 except Marine	0.35	0.55	0.026	0.057	0.098	0.047	0.059	0.065
5 and Marine 4	0.32	0.55	0.026	0.057	0.082	0.033	0.050	0.055
6	0.32	0.55	0.026	0.048	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.048	0.057	0.028	0.050	0.055

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.

b. When more than half the insulation is on the interior, the mass wall *U*-factors shall be a maximum of 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.

c. Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.



2012 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Ceiling / Roof	38.00
Wall	24.00
Floor / Foundation	15.00
Ductwork (unconditioned spaces):	

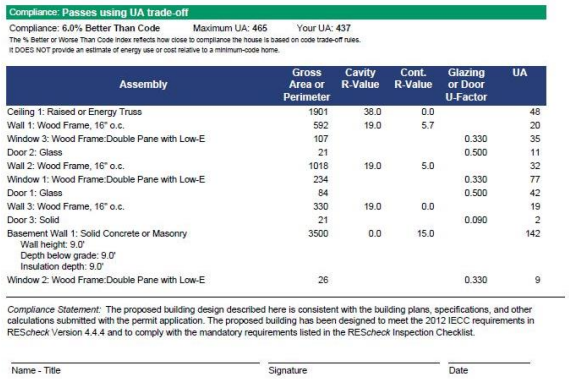
Glass & Door Rating	U-Factor	SHGC
Window	0.33	0.30
Door	0.50	0.30

Heating & Cooling Equipment	Efficiency
Heating System:	
Cooling System:	
Water Heater:	

Building Air Leakage and Duct Test Results	
Building Air Leakage Test Results	
Name of Air Leakage Tester	
Duct Tightness Test Results	
Name of Duct Tester	

Name: Date:

Comments:



Compliance: **Passes using UA trade-off**

Compliance: **6.0% Better Than Code** Maximum UA: **465** Your UA: **437**

The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Ceiling 1: Raised or Energy Truss	1901	38.0	0.0		48
Wall 1: Wood Frame, 16" o.c.	592	19.0	5.7		20
Window 3: Wood Frame:Double Pane with Low-E	107			0.330	35
Door 2: Glass	21			0.500	11
Wall 2: Wood Frame, 16" o.c.	1018	19.0	5.0		32
Window 1: Wood Frame:Double Pane with Low-E	234			0.330	77
Door 1: Glass	84			0.500	42
Wall 3: Wood Frame, 16" o.c.	330	19.0	0.0		19
Door 3: Solid	21			0.090	2
Basement Wall 1: Solid Concrete or Masonry Wall height: 9.0' Depth below grade: 9.0' Insulation depth: 9.0'	3500	0.0	15.0		142
Window 2: Wood Frame:Double Pane with Low-E	26			0.330	9

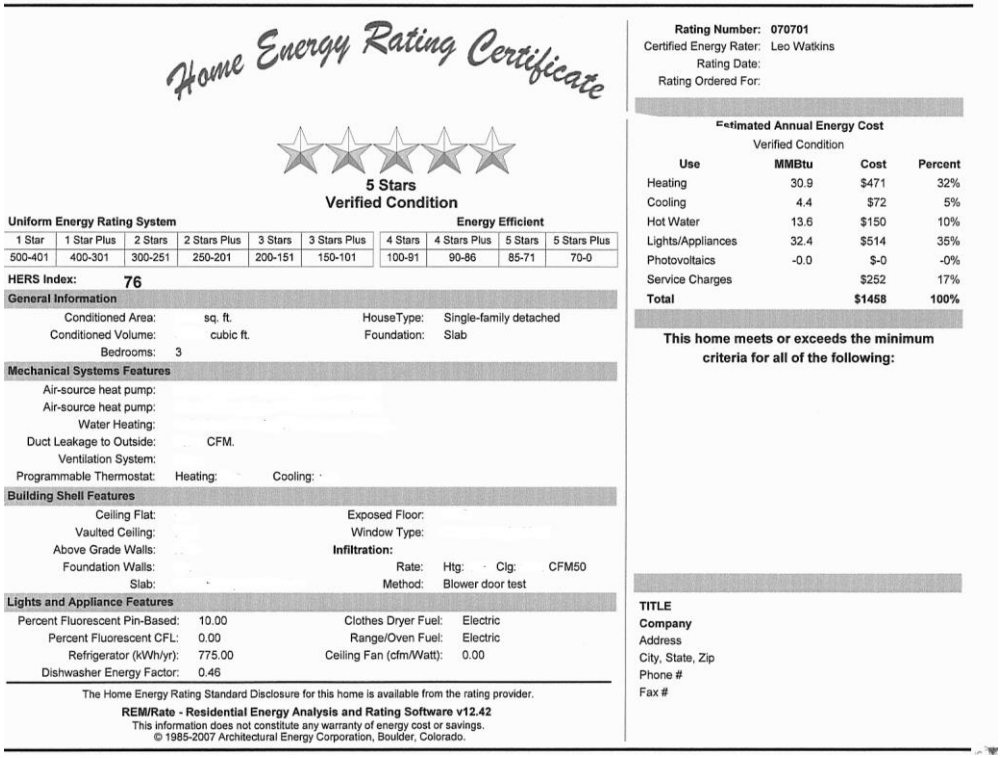
Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2012 IECC requirements in RES*check* Version 4.4.4 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title Signature Date

✓No Changes made

Simulated Performance Alternative - Section R405 (Performance)

- Performance Path
  - For Building Permit
    - Cost Compliance
    - Code Inspection Check list
  - For Certificate of Occupancy
    - Code Certificate



Home Energy Rating Certificate

5 Stars
Verified Condition

Uniform Energy Rating System — Energy Efficient

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70-0

HERS Index: 76

General Information
Conditioned Area: sq. ft. HouseType: Single-family detached
Conditioned Volume: cubic ft. Foundation: Slab
Bedrooms: 3

Mechanical Systems Features
Air-source heat pump:
Air-source heat pump:
Water Heating:
Duct Leakage to Outside: CFM.
Ventilation System:
Programmable Thermostat: Heating: Cooling:

Building Shell Features
Ceiling Flat: Exposed Floor:
Vaulted Ceiling: Window Type:
Above Grade Walls: Infiltration:
Foundation Walls: Rate: Htg: Clg: CFM50
Slab: Method: Blower door test

Lights and Appliance Features
Percent Fluorescent Pin-Based: 10.00 Clothes Dryer Fuel: Electric
Percent Fluorescent CFL: 0.00 Range/Oven Fuel: Electric
Refrigerator (kWh/yr): 775.00 Ceiling Fan (cfm/Watt): 0.00
Dishwasher Energy Factor: 0.46

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.42
This information does not constitute any warranty of energy cost or savings.
© 1985-2007 Architectural Energy Corporation, Boulder, Colorado.

Rating Number: 070701
Certified Energy Rater: Leo Watkins
Rating Date:
Rating Ordered For:

Estimated Annual Energy Cost
Verified Condition

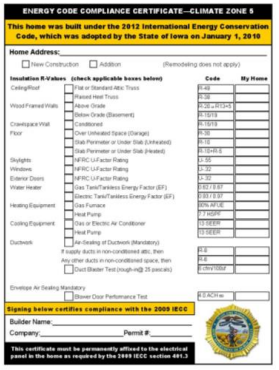
Use	MMBtu	Cost	Percent
Heating	30.9	$471	32%
Cooling	4.4	$72	5%
Hot Water	13.6	$150	10%
Lights/Appliances	32.4	$514	35%
Photovoltaics	-0.0	$-0	-0%
Service Charges		$252	17%
Total		$1458	100%

This home meets or exceeds the minimum criteria for all of the following:

TITLE
Company
Address
City, State, Zip
Phone #
Fax #

State and Local – Energy Code Inspections

- Code Inspections (Same rules apply regardless of jurisdiction)
  - By jurisdiction in larger cities
  - By State Electrical Inspectors in rural areas


ENERGY CODE COMPLIANCE CERTIFICATE—CLIMATE ZONE 5

This home was built under the 2012 International Energy Conservation Code, which was adopted by the State of Iowa on January 1, 2010

Home Address:

☐ New Construction ☐ Addition (Remodeling does not apply)

Insulation R-Values (check applicable boxes below)		Code	My Home
Ceiling/Roof	☐ Flat or Standard Attic Trusses	R-49	
	☐ Raised Heel Trusses	R-38	
Wood Framed Walls	☐ Above Grade	R-20 or R13+5	
	☐ Below Grade (Basement)	R-15/19	
Crawlspace Wall	☐ Conditioned	R-15/19	
Floor	☐ Over Unheated Space (Garage)	R-30	
	☐ Slab Perimeter or Under Slab (Unheated)	R-10	
	☐ Slab Perimeter or Under Slab (Heated)	R-15+5	
Skylights	NFRC U-Factor Rating	U-.55	
Windows	NFRC U-Factor Rating	U-.32	
Exterior Doors	NFRC U-Factor Rating	U-.32	
Water Heater	☐ Gas Tank/Tankless Energy Factor (EF)	.62 / 0.81	
	☐ Electric Tank/Tankless Energy Factor (EF)	2.93 / 3.97	
Heating Equipment	☐ Gas Furnace	90% AFUE	
	☐ Heat Pump	7.7 HSPF	
Cooling Equipment	☐ Gas or Electric Air Conditioner	13 SEER	
	☐ Heat Pump	13 SEER	
Ductwork	☐ Air-Sealing of Ductwork (Mandatory)		
	If supply ducts in non-conditioned attic, then	R-8	
	Any other ducts in non-conditioned space, then	R-6	
	☐ Duct Blaster Test (rough-in@ 25 pascals)	4 cfm/100sf	
Envelope Air Sealing Mandatory			
	☐ Blower Door Performance Test	3 ACH 50	

Signing below certifies compliance with the 2009 IECC

Builder Name:

Company: Permit #:

This certificate must be permanently affixed to the electrical panel in the home as required by the 2009 IECC section 401.3

- Permit triggers for Inspections
  - Electrical permit in rural areas
    - Electrician requests inspection from electrical inspector, who will conduct an electrical and energy code inspection.
  - Building permit in jurisdictional
    - Builder requests inspection from the city, the energy code inspection is completed by the jurisdiction inspector
  - Or a third party inspector
    - Builder requests inspection from the HERS rater, the energy code inspection is completed by the HERS Rater.

Structure of the 2012 IECC

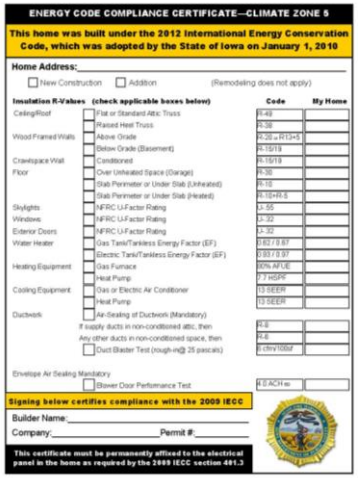
Residential Energy Efficiency

Chapter 4 (RE)

Mandatory Code Sections

R401.3 – Certificate – Mandatory

Electrical Panel certificate of compliance



ENERGY CODE COMPLIANCE CERTIFICATE—CLIMATE ZONE 5

This home was built under the 2012 International Energy Conservation Code, which was adopted by the State of Iowa on January 1, 2010

Home Address:_____

☐ New Construction ☐ Addition (Remodeling does not apply)

Insulation R-Values (check applicable boxes below)			Code	My Home
Ceiling/Roof	☐	Flat or Standard Attic Truss	R-49	
	☐	Raised Heel Truss	R-38	
Wood Framed Walls	☐	Above Grade	R-20 or R13+5	
	☐	Below Grade (Basement)	R-19/19	
Crawlspace Wall	☐	Conditioned	R-19/19	
Floor	☐	Over Unheated Space (Garage)	R-38	
	☐	Slab Perimeter or Under Slab (Unheated)	R-10	
	☐	Slab Perimeter or Under Slab (Heated)	R-10+R-5	
Skylights	☐	NFRC U-Factor Rating	U-.55	
Windows	☐	NFRC U-Factor Rating	U-.32	
Exterior Doors	☐	NFRC U-Factor Rating	U-.32	
Water Heater	☐	Gas Tank/Tankless Energy Factor (EF)	0.62 / 0.67	
	☐	Electric Tank/Tankless Energy Factor (EF)	0.93 / 0.97	
Heating Equipment	☐	Gas Furnace	90% AFUE	
	☐	Heat Pump	7.7 HSPF	
Cooling Equipment	☐	Gas or Electric Air Conditioner	13 SEER	
	☐	Heat Pump	13 SEER	
Ductwork	☐	Air-Sealing of Ductwork (Mandatory)		
		If supply ducts in non-conditioned attic, then	R-8	
		Any other ducts in non-conditioned space, then	R-6	
	☐	Duct Blaster Test (rough-in@ 25 pascals)	4 cfm/100sf	
Envelope Air Sealing Mandatory				
	☐	Blower Door Performance Test	4 ELA/ACH 50	

Signing below certifies compliance with the 2009 IECC

Builder Name:_____

Company:_____ Permit #:_____

This certificate must be permanently affixed to the electrical panel in the home as required by the 2009 IECC section 401.3

R402.4 – Air Leakage – Mandatory

R402.4.1.1 Installation – Table R402.4.1.1

R402.4.1.2 Testing – 4 ACH50

R402.4.2 Fireplaces – Wood Burning

R402.4.3 Fenestration Air Leakage

R402.4.4 Recessed Lighting – IC Rated Cans

R402.5 – Maximum Fenestration U-factor and SHGC – Mandatory

R403.1 – Controls – Mandatory

R403.1.1 Programmable Thermostat

R403.1.2 Heat Pump Supplementary Heat Control

R403.2.2 Duct Sealing – Mandatory

Duct Tightness Post Construction, 6 CFM per 100 SF

Duct Tightness Rough-in, 6 CFM per 100 SF

Mandatory Code Sections

R403.2.3 – Building Cavities – Mandatory

Returns in Building Cavities to be Sealed & Tested

Supplies not allowed

R403.4.1 – Circulating Hot Water Systems – Mandatory

Provide and automatic or accessible manual switch

R403.5 – Mechanical Ventilation – Mandatory

Meets the requirements of the IRC or IMC

R403.5.1 – Whole house mechanical ventilation system fan efficacy.

R403.4 – Equipment Sizing – Mandatory

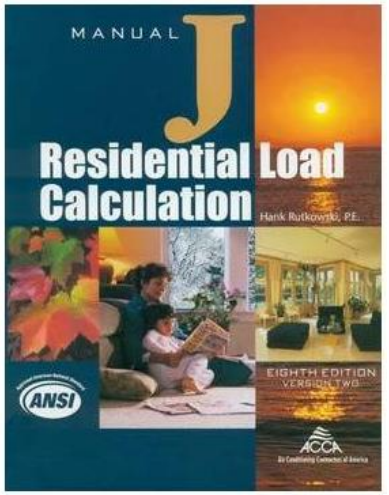
Manual J and S required

R403.7 Systems serving multiple dwelling units

R403.8 Snow melt system controls

R403.9 Pools and in-ground installed spas

- R403.9.1 Heaters
- R403.9.2 Time switches
- R403.9.3 Covers



Mandatory Code Sections

R404.1 – Lighting Equipment – Mandatory

75% of permanently installed lamps shall be high-efficiency

R404.1.1 lighting equipment – Fuel Gas lighting - no pilot lights

Building Thermal Envelope

Section R402.4.1 – Air Leakage - Mandatory

Two Mandatory requirements to demonstrate compliance

✓ Whole-house pressure test (Iowa Change)

Air Leakage Rate	Climate Zone	Test Pressure
≤ 4 ACH	5-6	50 Pascals

- Testing may occur any time after creation of all building envelope penetrations

✓ Field verification of items listed in Table R402.4.1.1

Building Thermal Envelope

Section R402.4.1 – Air Leakage - Mandatory

TABLE R402.4.1.1
AIR BARRIER AND INSULATION INSTALLATION

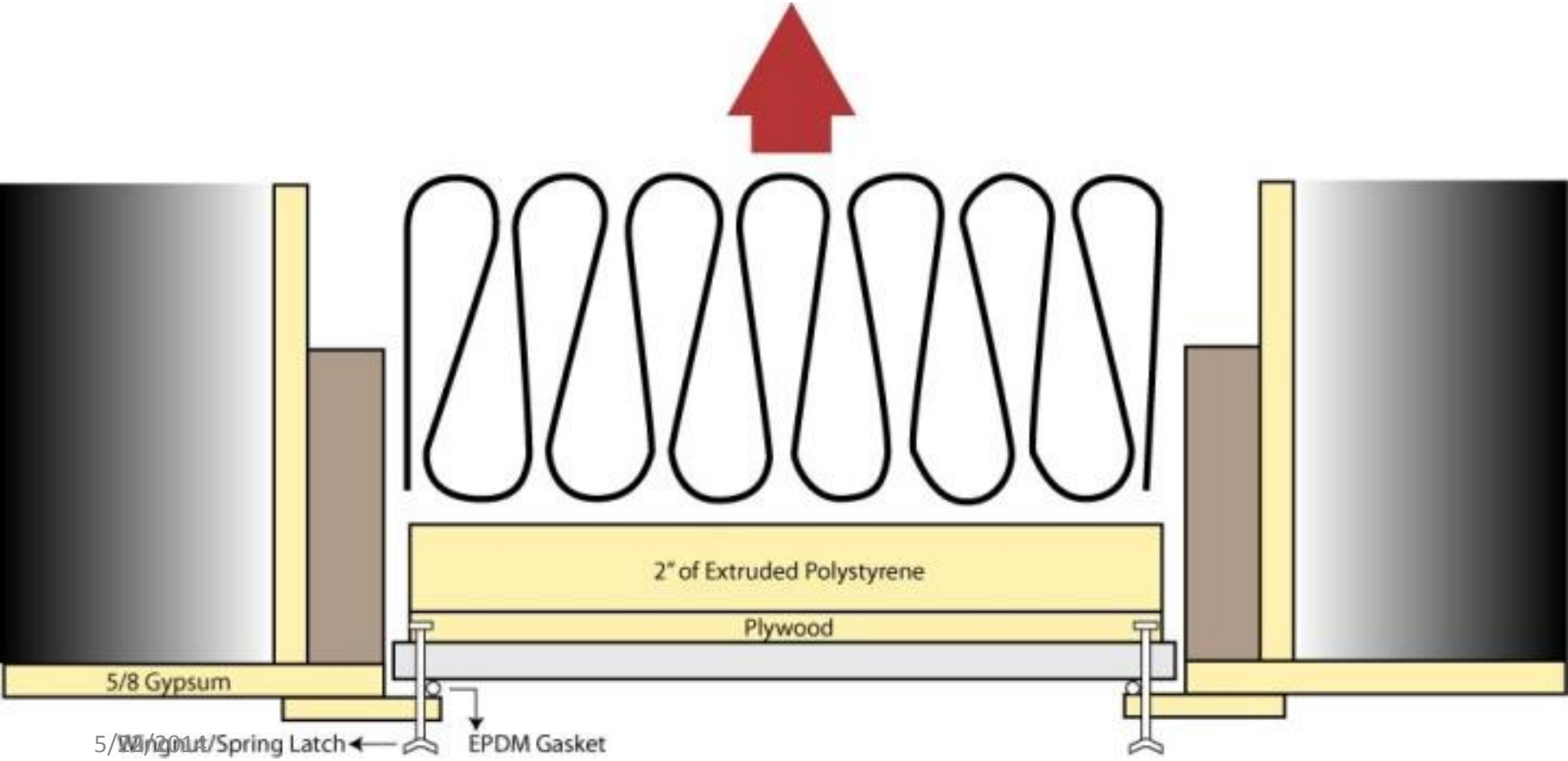
COMPONENT	CRITERIA[a]
Air barrier and thermal barrier	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed. Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.
Walls	Corners and headers shall be insulated and the junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.
Rim joists	Rim joists shall be insulated and include the air barrier.
Floors (including above-garage and cantilevered floors)	Insulation shall be installed to maintain permanent contact with underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated and the air barrier installed separating them from the showers and tubs.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors.

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Building Thermal Envelope

Section R402.4.1 – Air Leakage **-** Mandatory

Attic Hatch



Duct Sealing

***Section R403.2.2* -** Mandatory

- ✓ Sealing (Mandatory)
  - Joints and seams to comply with IMC or IRC
  - All ducts, air handlers, and filter boxes to be sealed *(Section R403.2.2)*

- <u>Exceptions</u>
  - No additional joint seals required for air-impermeable spray foam product
  - Where duct connection is partially inaccessible, 3 screws or rivets to be equally spaced on exposed portion of joint to prevent a hinge effect
  - Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures < 2 in. w.c. pressure classification don't require additional closure systems

Duct Tightness Tests
Section R403.2.2 - Mandatory

Duct tightness shall be verified by either of the following:

- ❑ <u>2012 Post construction test</u>
  - Total leakage: ≤ 6 cfm/per 100 ft^2 of conditioned floor area
    - tested at a pressure differential of 0.1 in w.g. (25Pa) across entire system, including manufacturer's air handler enclosure
  - All register boots taped or otherwise sealed

- ❑ <u>2009 Post construction test</u>
  - Leakage to outdoors: ≤8 cfm/per 100 ft^2 of conditioned floor area **or**
  - Total leakage: ≤12 cfm/per 100 ft^2 of conditioned floor area
    - tested at a pressure differential of 0.1 in w.g. (25Pa) across entire system, including manufacturer's air handler enclosure
  - All register boots taped or otherwise sealed

Duct Tightness Tests
Section R403.2.2 - Mandatory

✓2012 Rough-in test

Total leakage ≤6 cfm/per 100 ft^2 of conditioned floor area

tested at a pressure differential of 0.1 in w.g. (25Pa) across roughed-in system,
including manufacturer's air handler enclosure
all register boots taped or otherwise sealed
if air handler not installed at time of test

Total air leakage ≤3 cfm/per 100 ft^2

Exceptions: Duct tightness test is not required if the air handler and all ducts are located within building thermal envelope.

✓2009 Rough-in test

Total leakage ≤6 cfm/per 100 ft^2 of conditioned floor area

tested at a pressure differential of 0.1 in w.g. (25Pa) across roughed-in system,
including manufacturer's air handler enclosure
all register boots taped or otherwise sealed
if air handler not installed at time of test

Total air leakage ≤4 cfm/per 100 ft^2

Exceptions: Duct tightness test is not required if the air handler and all ducts are located within conditioned space

Building Cavities

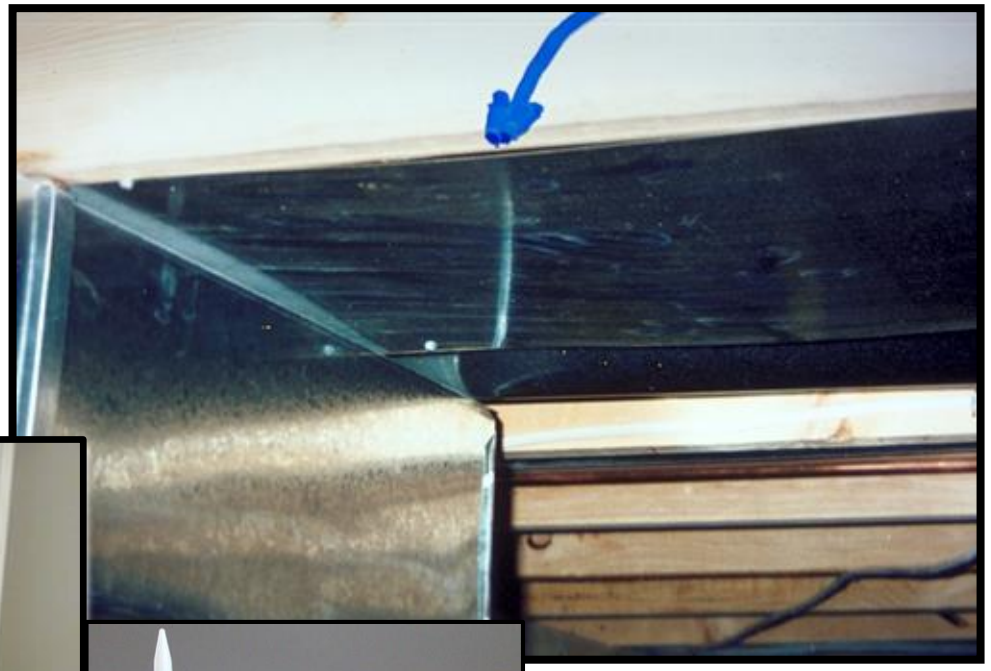
Section R403.2.3 - Mandatory

- Framing cavities cannot be used as supply ducts

Building Cavities

Section R403.2.3 - Mandatory

- Framing cavities can be used as return ducts if they are sealed and tested (Iowa Change)



Piping Insulation

Section R403.3 **-** Mandatory

Section R403.4 - Prescriptive

- R-3 required on HVAC systems. (Mandatory)
  - Exception: Piping that conveys fluids between 55 and 105°F
- R-3 required on Hot Water Piping. (Prescriptive)
  - Piping > ¾ in. nominal diameter
  - Piping serving more than one dwelling unit
  - Piping from the water heater to kitchen outlets
  - Piping located outside the conditioned space
  - Piping from the water heater to a distribution manifold
  - Piping under a floor slab
  - Buried piping
- Supply and return piping in recirculating systems other than demand recirculation systems
- Piping with run lengths > maximum run lengths for nominal pipe diameter in Table R403.4.2
- All remaining piping to be at least R-3 or meet run length requirements in Table R403.4.2

TABLE R403.4.2
MAXIMUM RUN LENGTH (feet)[a]

Nominal Pipe Diameter of Largest Diameter Pipe in the Run (inch)	3/8	1/2	3/4	> 3/4
Maximum Run Length	30	20	10	5

For SI: 1 inch = 25.4 mm, 1 foot 304.8 mm.

a. Total length of all piping from the distribution manifold or the recirculation loop to a point of use.

Mechanical Ventilation

Section R403.5 Mandatory

- ✓ **Ventilation**
  - Building to have ventilation meeting IRC or IMC or with other approved means (International Residential Code or International Mechanical Code)

M1507.3 Whole-house mechanical ventilation system. Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1507.3.1 through M1507.3.3.

M1507.3.1 System design. The whole-house ventilation system shall consist of one or more supply or exhaust fans or a combination of such and associated ducts and controls. Where local supply or exhaust fans are used as part of such a system, they shall be tested and rated in accordance with HVI 916, and the fans' rated flow at 0.25 in w.c. static pressure shall equal or exceed the required ventilation rate determined by Section M1507.3.3. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply ventilation.

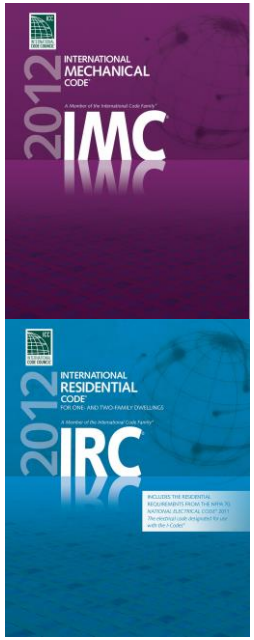
M1507.3.2 System Controls. The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

M1507.3.3 Mechanical ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate not less than that determined in accordance with Table M1507.3.3(1).

Exception: The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25% of each 4 hour segment and the ventilation rate prescribed in Table M1507.3.3(1) is multiplied by the factor determined in accordance with Table M1507.3.3(2).

TABLE M1507.3.3(1)
CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

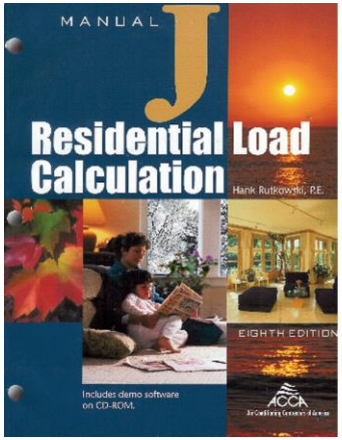
Dwelling Unit Floor Area (square feet)	Number of Bedrooms				
	0-1	2-3	4-5	6-7	>7
	Airflow in CFM				
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

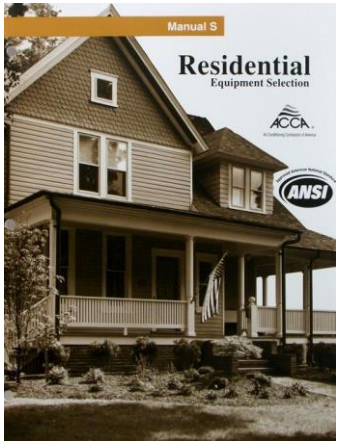


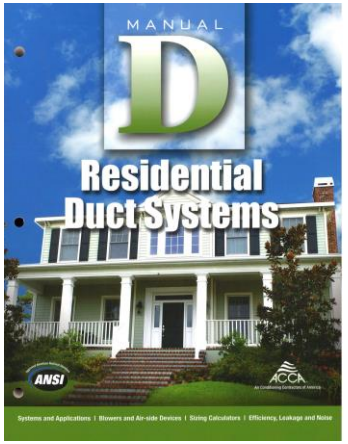
Equipment Sizing

Section R403.6 Mandatory

- Equipment Sizing
  - IECC references Section M1401.3 of the IRC (*International Residential Code*).
  - Load calculations determine the proper capacity (size) of equipment
    - Goal is big enough to ensure comfort but no bigger
  - Calculations shall be performed in accordance with ACCA Manual J & S or other approved methods (*Air Conditioning Contractors of America)*







Lighting Equipment

***Section R404.1* -** Mandatory

A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or 75% of permanently installed lighting fixtures to contain only high efficacy lamps

Exception: Low-voltage lighting

- Applies to permanently installed lighting fixtures
- Requires 75% to be
  - Compact Fluorescent
  - T-8 Linear Fluorescent
  - Meet minimum efficacy requirements
- Applies to interior and exterior lighting

Resources

www.energycodes.gov

ICCSAFE.ORG

Questions

CITY OF ANKENY CONSTRUCTON & DEVELOPMENT PERSONNEL

- Carmen Santee, Permits Clerk
- Lori Peterson, Permits Clerk
- Kathy Dozler, Permits Specialist
- Eric Clark, Combination Inspector I
- Michael Villamagna, Combination Inspector I
- Craig Larsen, Combination Inspector II
- Jerry Agan, Combination Inspector III
- John Cabeen, Code Enforcement Officer II
- Dennis Neff, Civil Engineering Technician
- Don Clark, Civil Engineer
- Jeff Junker, Building & Zoning Administrator
- Eric Carstens, Planning Administrator
- Emily Bodeker, Planner I
- Julie Gould, Associate Planner
- Eric Jensen, Director of Planning & Building
- Jared Bright, Storm Water Coordinator
- Ken Plager, Water Administrator

New Permitting System

- The City of Ankeny has recently acquired a new permitting software system. The system will have future capability of 'live-time, on-line' permit status, inspection status etc.
- Anticipating on-line permit submittals may at some point be accommodated as well.
- Something to look forward to!

CURRENT ANKENY CODES

- 2012 International Residential Code
- 2012 International Building Code
- 2012 International Fire Code
- 2012 International Mechanical Code
- 2012 International/Uniform Plumbing Code
- 2012 International Energy Conservation Code
- 2012 International Property Maintenance Code
- 2011 National Electric Code
  - 2014 NEC when mandated by State of Iowa

PERMIT FEE SCHEDULE

- Building permit fees will be increasing on July 1, 2014
  - There has been no average cost per square foot valuation increase since 2009
  - There has been no fee table increase since 2006
- Builders – for single family dwellings we charge no plan review or handling fee
  - *changing house plans after permitting and before construction starts will afford no more than an 80% building permit fee refund*

PERMIT FEE SCHEDULE

- Single Family Dwellings permit fee increase includes updated Building Valuation Data, revised permit fee schedule and updated sidewalk and driveway fees.
- Multi Family, commercial and industrial permit fee increase includes updated Building Valuation Data, revised permit fee schedule and updated sidewalk and driveway fees. Additionally, a 65% plan review fee will be included, like our peer communities.

SINGLE FAMILY PERMIT FEE (example)

- Single family ranch style dwelling
  - 2,000 square foot main floor
  - 1,000 square foot finished basement
  - 1,000 square foot unfinished basement
  - 720 square foot attached garage
  - Driveway & Sidewalk

  Current dwelling valuation - $277,419
  Current building permit fee - $1,269

  July 1, 2014 valuation - $296,166
  July 1, 2014 building permit fee - $1,505
  Permit fee difference - $236

  Building permit fee includes driveway and sidewalk.

PERMIT FEE SCHEDULE

- **All** Temporary Certificates of Occupancy will incur a fee of $50

- *As of July 1, 2014 - - Payment will be required prior to issuance of any Temporary Certificate of Occupancy.*

PERMIT FEE SCHEDULE

- Re-inspections (more than one – same project/items) will incur a fee of $50 per re-inspect

- *As of July 1, 2014 - - Payment will be required prior to any additional inspections.*

  - Re-inspection requests for framing and/or final inspections will not be accepted when requesting the initial framing or final inspection.

PERMIT FEE SCHEDULE

- Re-inspections (more than one – same project/items) will incur a fee of $50 per re-inspect
- *As of July 1, 2014 - - Payment will be required prior to any additional inspections.*
  - Building Division Inspection staff will not provide a punch list for incomplete projects
    - Monitor your projects for compliance and completeness before calling for inspections

PERMIT HOLDERS YOU ARE RESPONSIBLE FOR YOUR PROJECTS

- **175.13 SUBSECTIONS 105.6.1 AND R105.6.1 ADDITION - - REVOCATION OF PERMIT.** Subsections 105.6.1 Revocation of Permit, of the IBC and R105.6.1, Revocation of Permit, of the IRC, are hereby established by adding the following subsections:
-
- Subsections 105.6.1 and R105.6.1 Revocation of Permit It is the responsibility of the permit holder to schedule the required inspections and obtain final approval. Failure to schedule the required inspections and receive approval of work authorized by the permit before covering said work or at completion shall result in revocation of the permit and void any associated approvals granted by the City. This failure shall also equate to working without a permit in violation of City ordinance and no future permits shall be issued to any person or company who has outstanding violations of this code or any other laws or ordinances of the City. Failure to contact the City for any inspection or follow-up prior to expiration of a permit shall be deemed a violation of this code section. Failure to contact the City for any inspection or follow-up prior to expiration of a Temporary Certificate of Occupancy shall also be deemed a violation of this code section. Allowing occupancy of a structure, for which a person or company holds a building permit, prior to or without a valid Certificate of Occupancy (temporary or final) shall be deemed a violation of this code section and no future permits shall be issued to any person or company who has outstanding violations of this code or any other laws or ordinances of the City.

PERMIT HOLDERS YOU ARE RESPONSIBLE FOR YOUR PROJECTS

- **175.13 SUBSECTIONS 105.6.1 AND R105.6.1 ADDITION -- REVOCATION OF PERMIT.** Subsections 105.6.1 Revocation of Permit, of the IBC and R105.6.1,
- If you have projects on a Temporary Certificate of Occupancy have them completed and call for a final inspection before May 30th of this year -or- before the expiration date, whichever is applicable!
- Expired Temporary Certificates of Occupancy are grounds for no more permits to be issued.

ONGOING ISSUES

PERMIT SUBMITTAL RELATED

Checklist for a Complete Application

- ✓ Complete and Accurate Application Form
- ✓ Complete Construction Plans
- ✓ Site Plan Showing Easements
- ✓ Site Plans Showing **Actual** Setbacks
- ✓ Manual ‘D’ and ‘J’ Documentation
- ✓ REM/Rate if using performance path
- ✓ REScheck if using tradeoff approach
- ✓ COSESCO/Site Erosion Control Plan
- ✓ Special Forms (Flood Plain or MPE)

Completeness of Permit Applications

- Application submittals are not acceptable unless compliance with all submittal requirements is met.

- Application submittals that are incomplete or inaccurate will be returned to the applicant without further review.

Common Email Address

- For electronic submission of documents, rather than forwarding to an individual, use the following account:
- energyinfo@ankenyiowa.gov
- For energy audits, duct layouts, equipment sizing etc.
- Do not send directly to Carmen or Kathy or other City staff unless specifically requested!

Trades' Registration and Licensing

- In order to acquire permits you must:
  1. Provide a complete and accurate "2014 Trade Contractor Registration Application"
  2. Hold a valid State of Iowa Contractor's license along with a valid Master's license for said Contractor's license
  3. Be registered with Iowa Workforce Development
  4. Provide list of authorized agents who may sign permit applications

Trades' Registration and Licensing

In order to acquire permits you must have submitted a complete and accurate '2014 Trade Contractor Registration Application'.

Provide copies of your State of Iowa contractor license as well as a copy of the State of Iowa licensed Master for your firm.

Please note: Your contractor license number is not the same as your Workforce Development registration number!

city of Ankeny
bringing it all together

2014 *Registration Application*
Trade Contractors

Shop Name: _____

State of Iowa Contractor License ID # _____ (Exp.Date) _____

Iowa Workforce Development Contractor's Registration # _____

Trade: ☐ Electrical ☐ Mechanical ☐ Plumbing *A separate application form is required for each trade registration!*

Address _____ City, State Zip _____

Business Phone # _____ Mobile Phone # _____

E-mail Address _____

Requirements:

☐ All contractors performing construction work must be registered with the Division of Labor

☐ All electrical, plumbing & mechanical contractors must hold a current license with the State of Iowa.

Master License(s) (*name as it appears on State of Iowa License*)

Name: _____ State License # _____
☐ Electrician Master A ☐ Electrician Master B ☐ Plumbing ☐ HVAC ☐ Refrigeration ☐ Hydronics

Name: _____ State License # _____
☐ Electrician Master A ☐ Electrician Master B ☐ Plumbing ☐ HVAC ☐ Refrigeration ☐ Hydronics

Agent(s) authorized to submit & sign for permits:

Full Name: _____ Title _____

Full Name: _____ Title _____

Full Name: _____ Title _____

Applicant, you are responsible for keeping our office updated with current information.

Applicant's Signature: _____ Title _____

Applicant's Printed name: _____

Applicant's e-mail address: _____

Date: _____

Office Use: Date verified: _____ by: _____
☐ scanned _____ ☐ entered in Permit Plan _____

Trades' Registration and Licensing

- In order to acquire permits you must have submitted a complete and accurate "2014 Trade Contractor Registration Application" along with copies of your State of Iowa contractor license as well as a copy of the State of Iowa licensed Master for your firm.
- Please note: Your contractor license number is not the same as your Workforce Development registration number!

Trades' Registration and Licensing

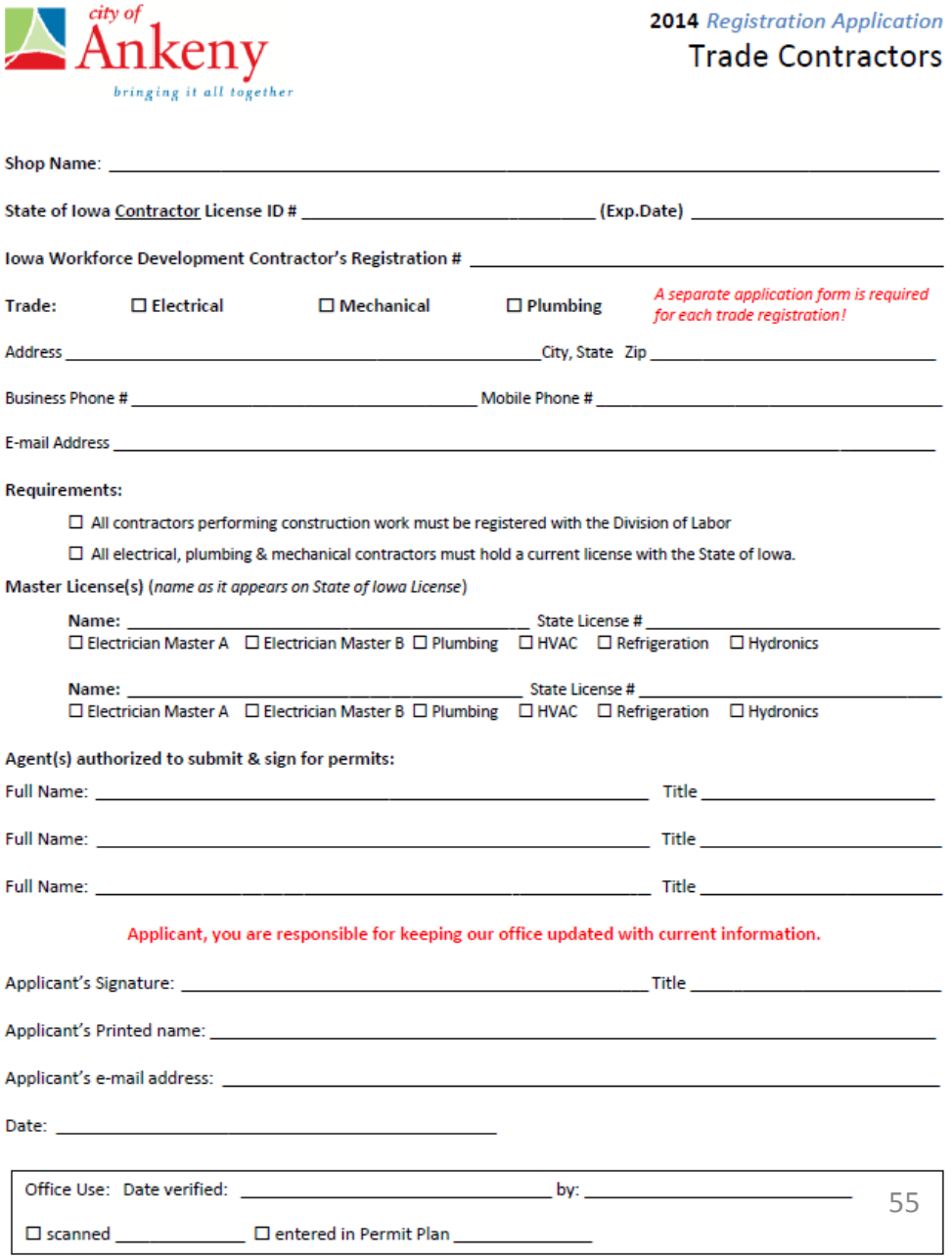
State Contractor's License #

Iowa Workforce Development #

State Master license #

Authorized agents who may sign permit apps

Applicants signature and printed name



city of Ankeny
bringing it all together

2014 *Registration Application*
Trade Contractors

Shop Name: _____

State of Iowa Contractor License ID # _____ **(Exp.Date)** _____

Iowa Workforce Development Contractor's Registration # _____

Trade: ☐ **Electrical** ☐ **Mechanical** ☐ **Plumbing** *A separate application form is required for each trade registration!*

Address _____ City, State Zip _____

Business Phone # _____ Mobile Phone # _____

E-mail Address _____

Requirements:

☐ All contractors performing construction work must be registered with the Division of Labor

☐ All electrical, plumbing & mechanical contractors must hold a current license with the State of Iowa.

Master License(s) (*name as it appears on State of Iowa License*)

Name: _____ State License # _____
☐ Electrician Master A ☐ Electrician Master B ☐ Plumbing ☐ HVAC ☐ Refrigeration ☐ Hydronics

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Agent(s) authorized to submit & sign for permits:

Full Name: _____ Title _____

Full Name: _____ Title _____

Full Name: _____ Title _____

Applicant, you are responsible for keeping our office updated with current information.

Applicant's Signature: _____ Title _____

Applicant's Printed name: _____

Applicant's e-mail address: _____

Date: _____

Office Use: Date verified: _____ by: _____

☐ scanned _____ ☐ entered in Permit Plan _____

ONGOING FIELD ISSUES

BUILDING/CONSTRUCTION RELATED

Address Posting

- Multiple lots and developments starting construction make it difficult to confirm addressing.
- Post address near the street of a size large enough to be readily visible from the street. Maintain the posted address.
- At the time of building permit application submittal – address posting should be installed.
- Without a posted address an inspection may not be conducted.


4904

SFD Interior Stairs – Riser Heights

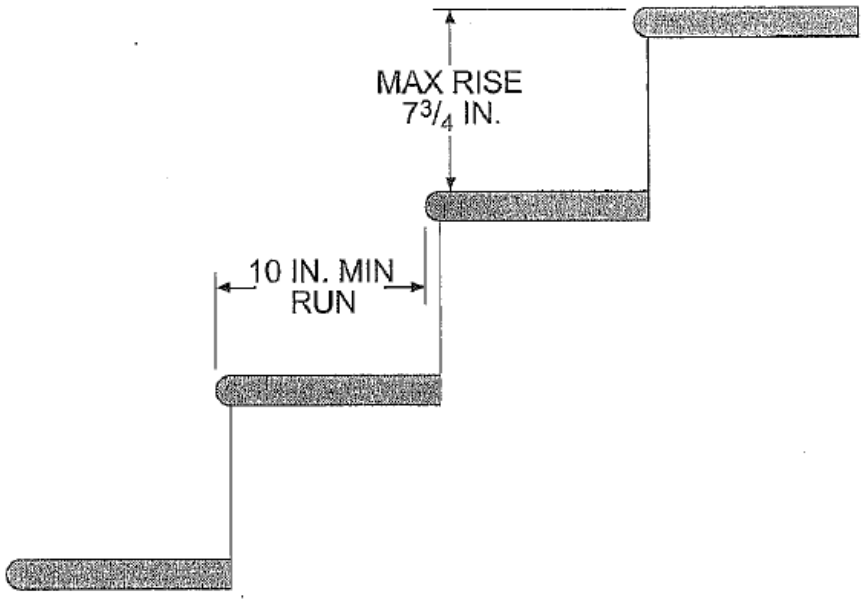
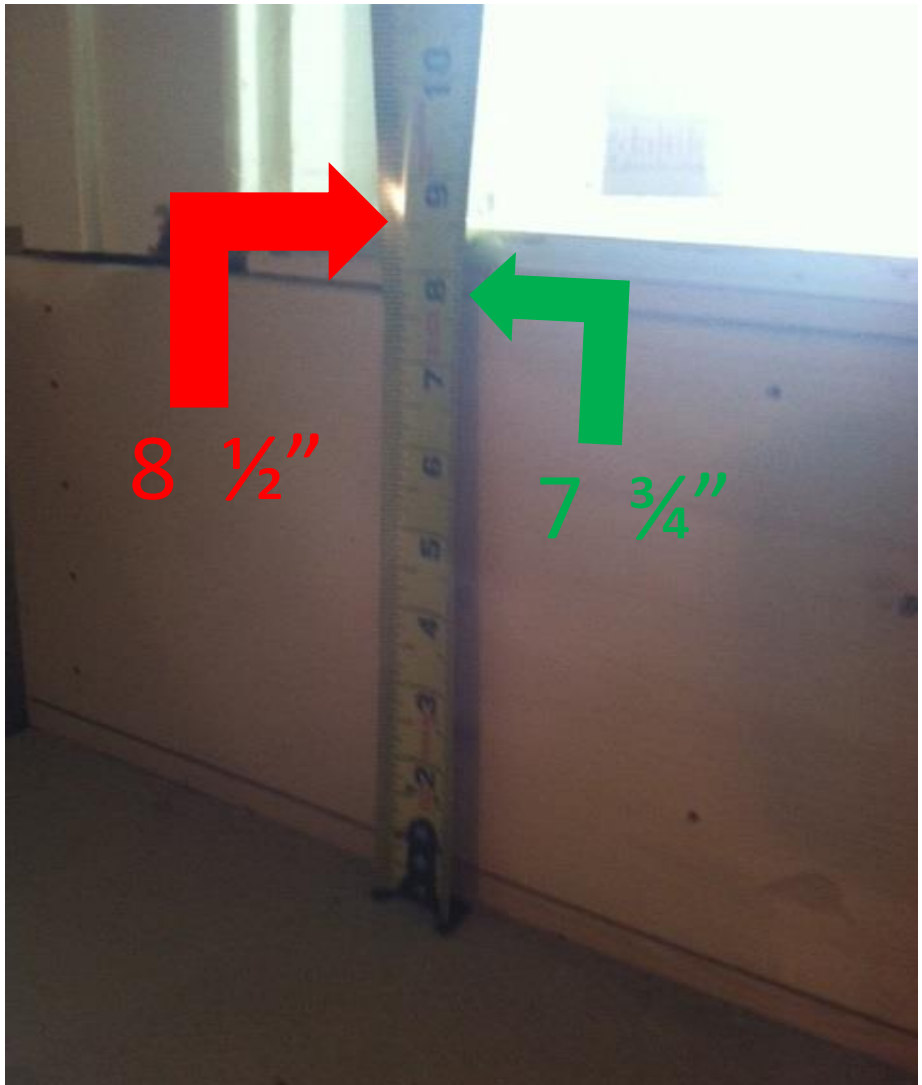


Figure R311.7.5.1(1)
CONVENTIONAL STAIRWAY

- Subsection R311.7.5.1 Riser height exception 2 The maximum riser height shall be 7 3/4 inches. The riser height shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch, except at the top or bottom riser of any interior stair where this dimension may deviate by a maximum of 1 inch. In no case shall the risers exceed the maximum height of 7 3/4 inches.

SFD Interior Stairs – Riser Heights

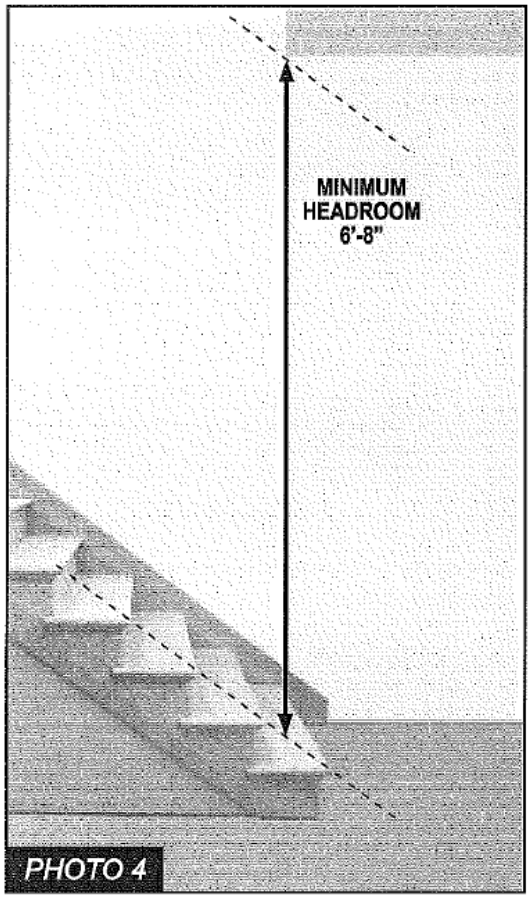


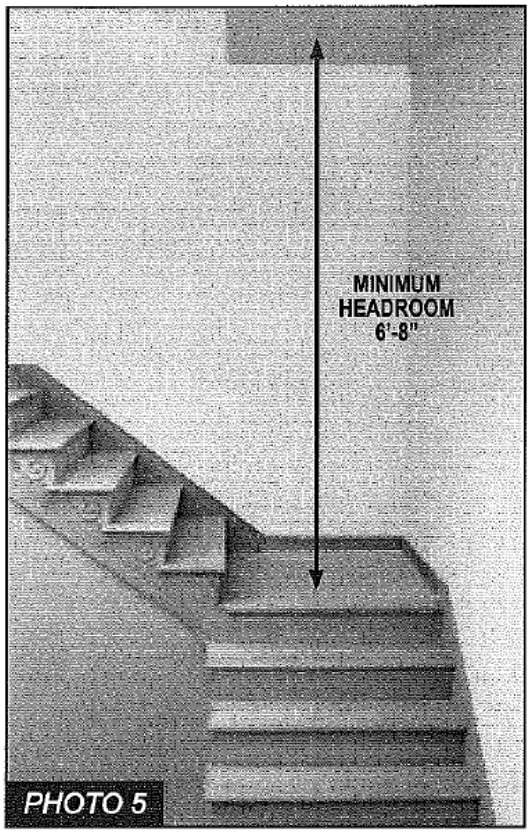
- <u>Subsection R311.7.5.1 Riser height exception 2</u> The maximum riser height shall be 7 3/4 inches. The riser height shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch, except at the top or bottom riser of any interior stair where this dimension may deviate by a maximum of 1 inch. In no case shall the risers exceed the maximum height of 7 3/4 inches.

SFD Interior Stairs – Headroom

SFD Interior Stairs – Headroom

R311.5.2 Headroom.
The minimum headroom in all parts of the stairway shall not be less than 6 feet, 8 inches (2036 mm) measured vertically from the sloped plane adjoining the tread nosing **PHOTO 4** or from the floor surface of the landing or platform. **PHOTO 5.**





Minimum headroom 6’ 8”

SFD Landings Outside Front Doors

- There shall be a floor or landing outside the a door, not more than 1 ½ inches below the top of threshold
- May not exceed slope of ¼” per foot
- Must be at least 3’ in each dimension
- Handrail and guardrail rules apply

SFD Landings Outside Other Doors

- There shall be a floor or landing on each side of a door not more than 1 ½ inches below the top of threshold.
  - Exception 1 – two or fewer risers (other than the front/required door)
  - Exception 2 – may be no more than 7 ¾ inches lower than top of threshold if only screen door swings over
- Stair rise and run rules apply
- Handrail and guardrail rules apply

Exterior Doors
Landing Required

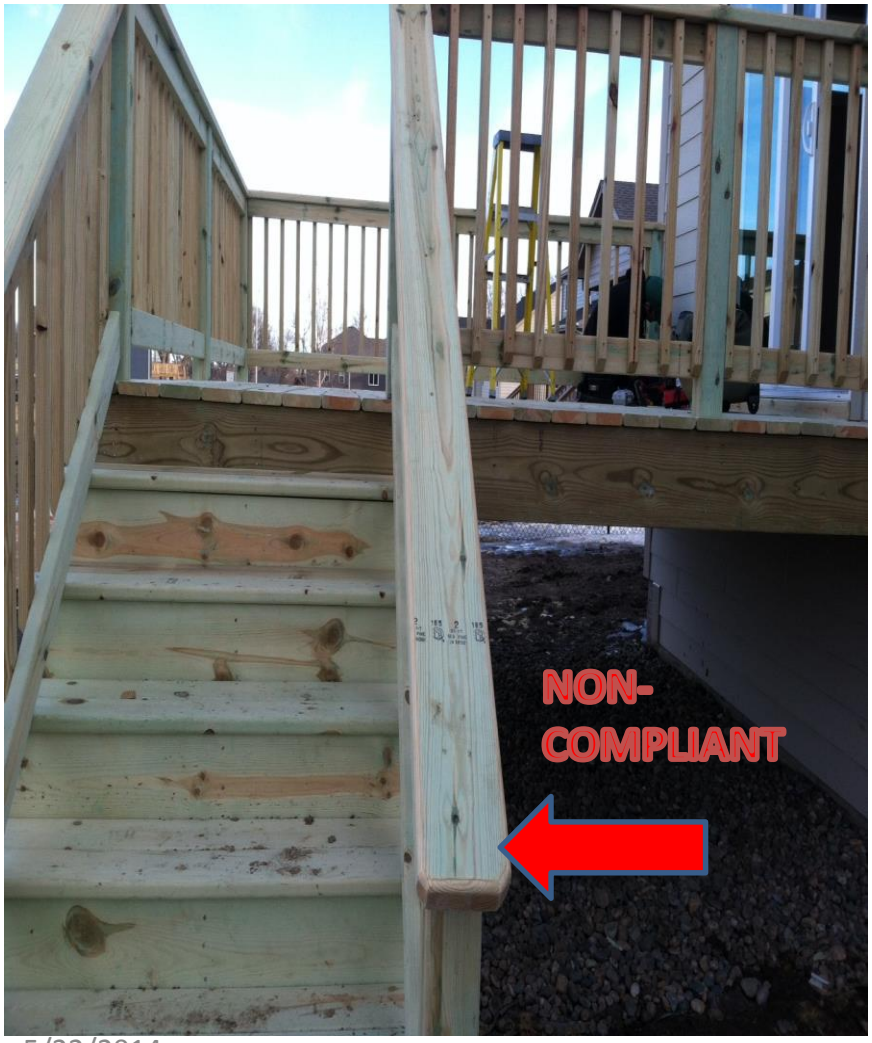
Minimum 3’ Least Dimension

SFD Landings Outside Other Doors

Correct

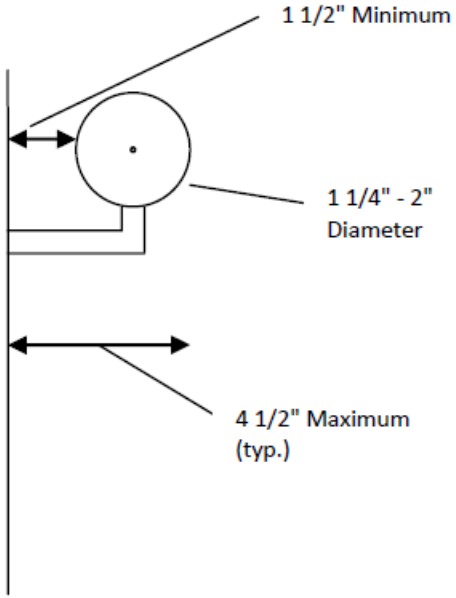
Incorrect

Deck Handrails

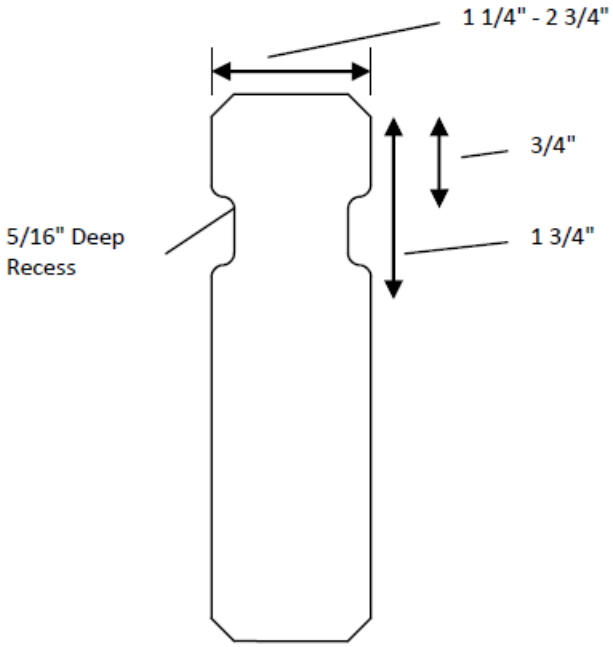


- Type II -Handrails with a perimeter greater than 6 1/4" shall provide a graspable finger recess (groove) on both sides of the profile. The finger recess shall begin within a distance of 3/4" measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16" within 7/8" below the widest portion of the profile. This required depth shall continue for at least 3/8" to a level that is not less than 1 3/4" below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4" to a maximum of 2 3/4". Edges shall have a minimum radius of 0.01".

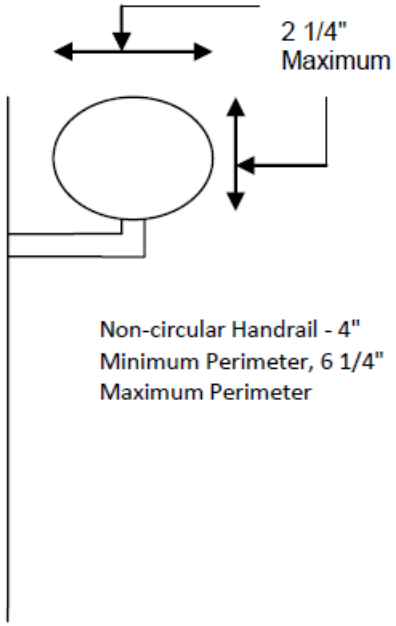
Deck Handrails



Circular Handrail



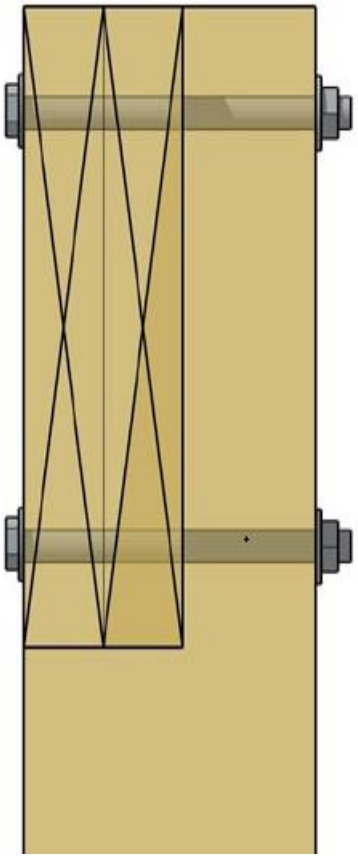
Other Shapes



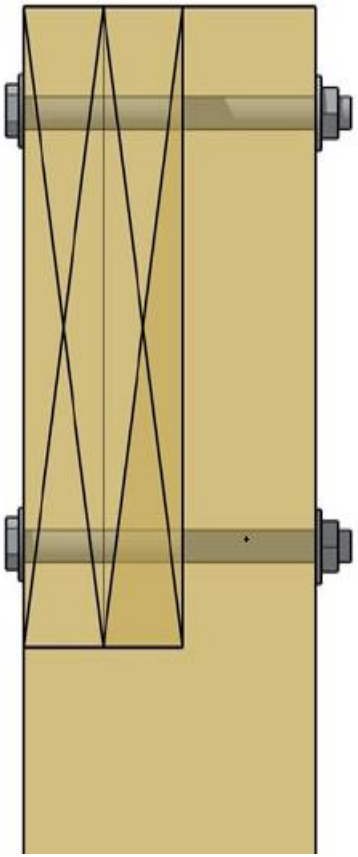
Non-circular Handrail

Allowed Shapes

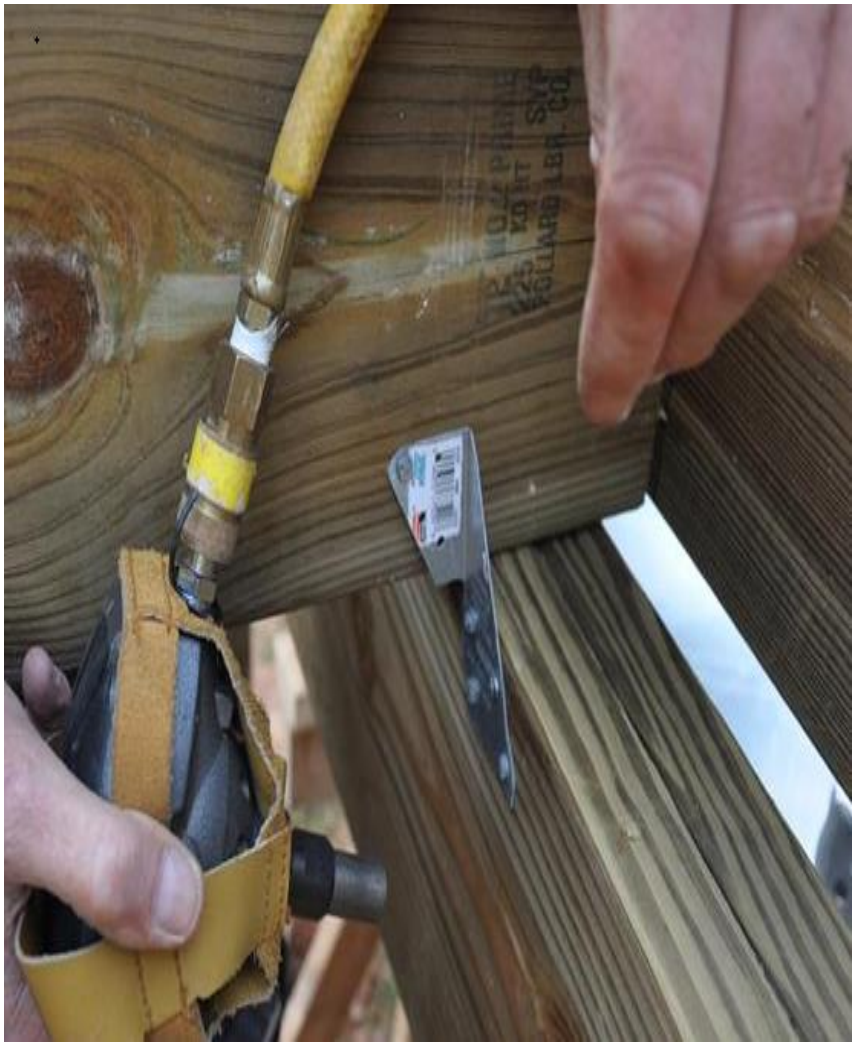
Decks – Beam to Post Connections



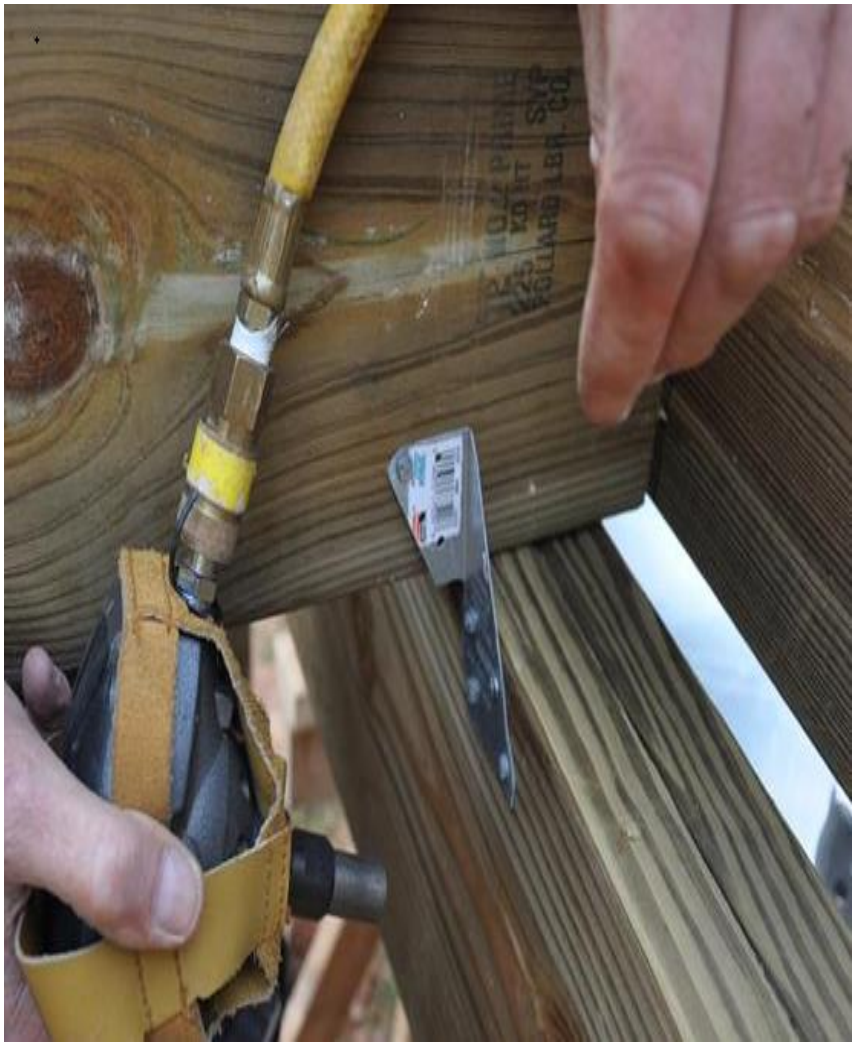
Decks – Beam to Post Connections



Decks – Joist to Beam Connections



Decks – Joist to Beam Connections



Exhaust Fans In Soffits

Air exhaust openings shall terminate not less than 3 feet from operable and non-operable openings into the building.

Note the proximity of the exhaust openings and eave vents.

NON-COMPLIANT!

Sill Plate Anchorage

- R403.1.6 Foundation Anchorage
  - Bolts shall be at least 1/2” diameter
  - Bolts shall extend a minimum of 7” into concrete
  - Bolts shall be spaced a maximum of 6’ on-center
  - There shall be a minimum of 2 bolts per plate section
  - Bolts shall be located not more than 12” and not less than 7 bolt diameters from the end of the plate section
  - A nut and washer shall be tightened on each anchor bolt
  - Strap anchors may be used if installed in accordance with the manufacturer’s listing and installation standards

    - These general provisions do not apply to narrow wall bracing

Foundation Straps

- Not allowed for narrow bracing anchorage
- MUST be installed per installation standards
- Improper installation will require an ‘engineered-fix’!

Narrow Wall Bracing (NWB)

- Narrow wall bracing inspections cannot be done with a weather-barrier or wall-covering concealing the fasteners.
- If covered up at the time of rough inspections, the inside wall will need to be sheathed.
- Call prior to covering.

Narrow Wall Bracing (NWB)

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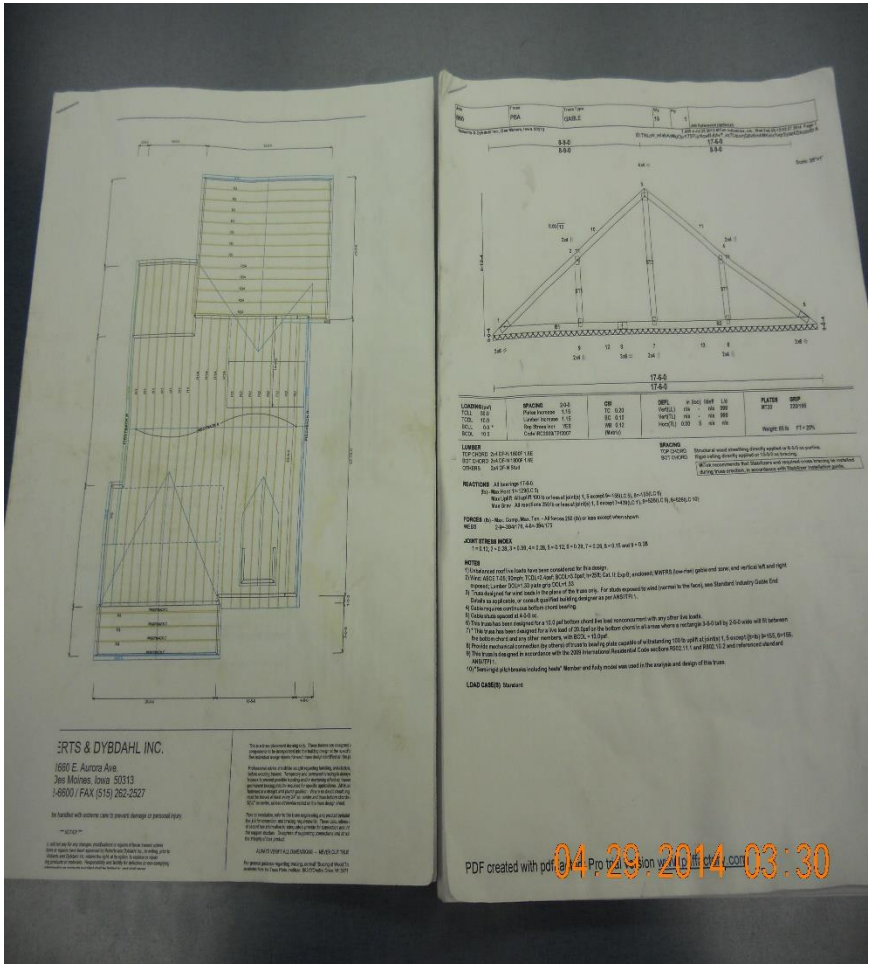
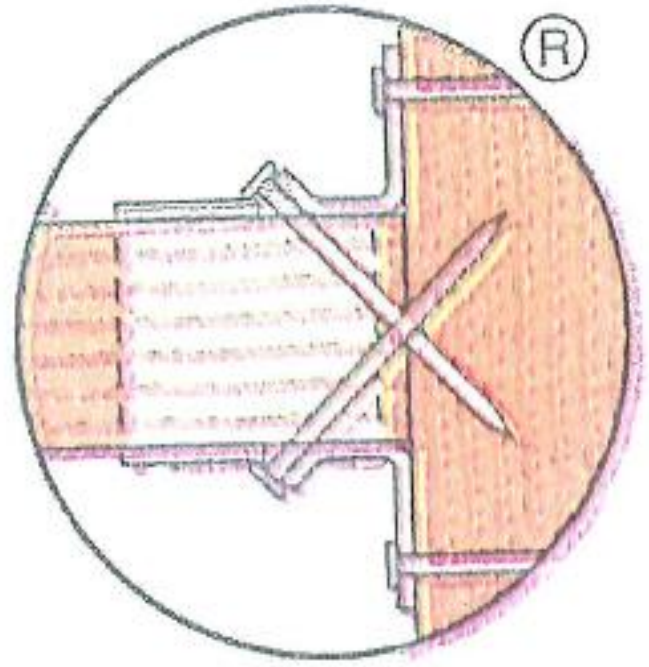
- If covered up at the time of rough inspections, the inside wall will need to be sheathed.

Manufactured Floor and Roof Trusses



- Provide on site at time of framing inspection whether or not electronic or hard copies were provided with permit submittal.

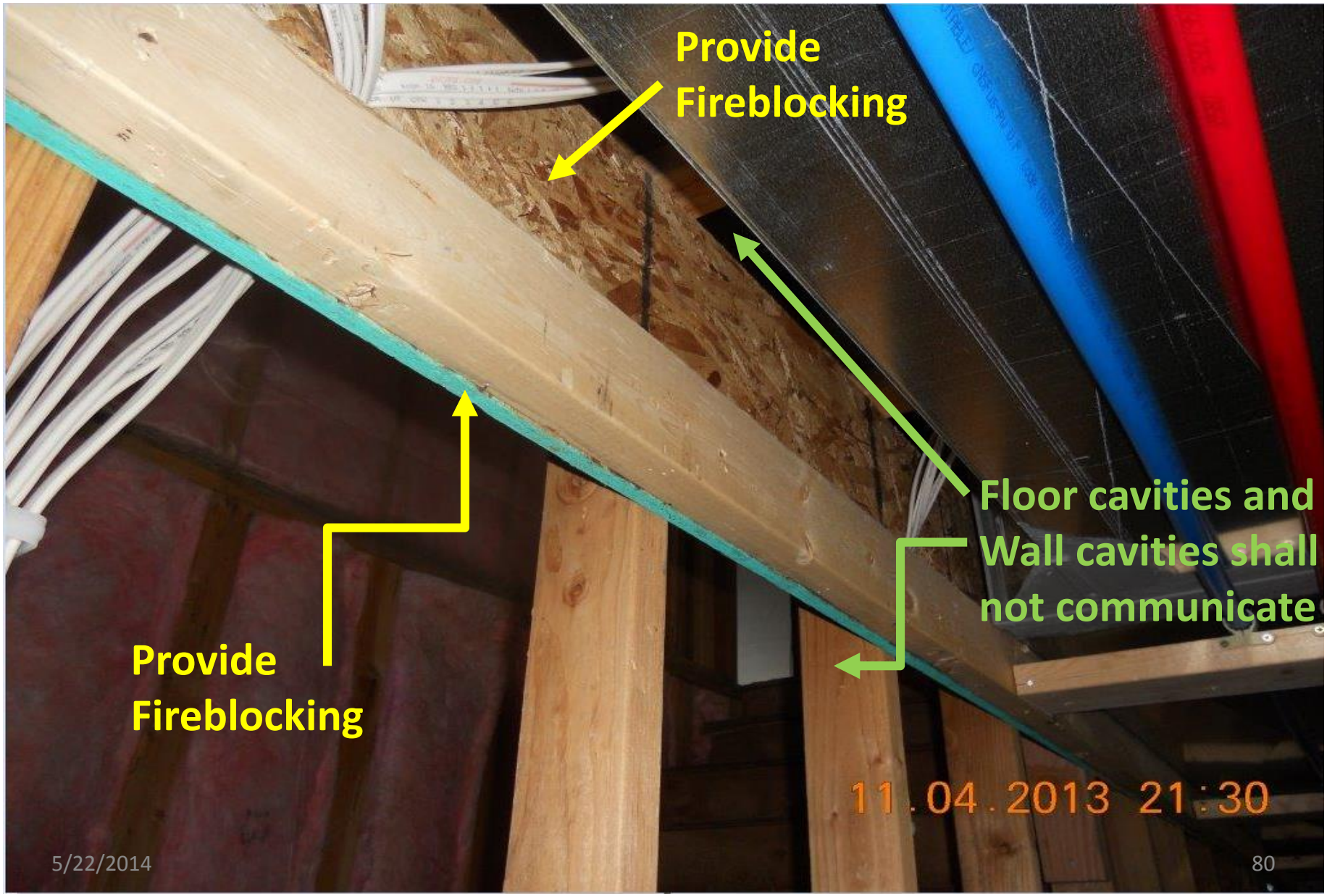
Hanger Anchorage



Double Shear Nailing *(Top View)*

- Use appropriate nails for the application.
- Install according to the manufacturer/hanger manufacturers' listing.

Fireblocking



Pre-rock Inspections

- Required prior to covering framing members or trades' work in multi-family buildings.

Pre-rock Inspections

- Pre-rock inspections are mandatory for multi-family buildings behind tubs and showers.

YOUR HELP IS NEEDED

- Site Activity

  -Trash -

- *Maintain Your Sites*

ONGOING ISSUES

INSPECTION SCHEDULING RELATED

Field Activities

- WITHOUT AT LEAST A 24 HOUR INSPECTION REQUEST NOTICE WE CANNOT GUARANTEE ANY INSPECTIONS AT YOUR CONVENIENCE!

- **48 HOUR (two working days) MINIMUM NOTICE IS REQUIRED FOR ALL *FRAMING* AND *FINAL* INSPECTIONS!**

- **City staff will coordinate ALL inspection timing!**

- **All inspection requests must be made through the inspection request desk @ 963-3533!**

Inspections Including Finals For Certificates of Occupancy

- Inspections and review occur by many Divisions' and Departments' personnel.
- **Same day final inspections and closings do not afford adequate time to address deficiencies and subsequent corrections nor adequate time for issuance of Certificates of Occupancy.**
- Plan ahead to allow time for adequate preparation. **A minimum of 48 hours (two working days) is required for final inspection scheduling requests!**

Final Inspections – Building Division Related

- Prior to calling for final inspection
- Confirm Field Inspection Checklist is Completed
  - Confirm all work is complete
    - Building
    - Plumbing
    - Electrical
    - Mechanical
    - Energy Compliance Certificate From HERS Rater
    - MPE #2 Documentation as applicable
    - FEMA As-Built Documentation as applicable
    - Water meter set

Final Inspections – Development Engineering Division Related

- Prior to calling for final inspection
  - Confirm all work is complete
    - Site grading, sod and landscaping
      - Established vegetation
      - Drainage Swales
    - Sidewalks and driveways
  - Confirm infrastructure is intact and working
    - Curb boxes, cleanouts, manholes etc
      - Infrastructure needing repair will hold up your Final C.O.

Final Inspections – Planning Division Related

- Prior to calling for final inspection
  - Confirm all work is complete
    - Berms
    - Landscaping
    - Trees
    - Shrubs
  - Typically these requirements exist in PUD's and/or along major streets
- Please make the call before you request a final inspection if you are unsure or have questions.

Final Inspections – Stormwater Division Related

- Prior to calling for final inspection
  - Confirm all work is complete
    - **Don't forget the *required topsoil!***
    - Site grading, sod and landscaping
      - Established vegetation
      - Drainage Swales
    - All erosion control measures removed from the site
  - **Erosion control measures shall be reinstalled after final grading (as applicable) and shall be maintained until the lot is permanently vegetated.**

Final Inspections and Certificates of Occupancy

- Final Certificate of Occupancy
- Final Certificate of Occupancy may be issued upon confirmation that all construction and zoning codes are compliant, lot is fully stabilized and erosion control features are removed.

Temporary Certificate of Occupancy ($50)

- A temporary Certificate of Occupancy may be offered provided all construction and zoning codes are compliant and all erosion control measures are compliant and maintained in-place. A temporary Certificate of Occupancy is valid for **no more than twenty one days** except during winter months. A temporary Certificate of Occupancy may include **no more than sod, landscaping and infrastructure/site issues**.
  - **Trees, shrubs, berms and other required landscape features are anticipated to be installed at the time of final inspection.**

Final Inspection Requests

- Minimum 48 hour (two working days) inspection request notice required
- Final inspection and closing on the same day often creates difficulties.
- **Same day C.O. issuance may not be accommodated.**
- Please plan ahead!

city of Ankeny

bringing it all together

CERTIFICATE OF OCCUPANCY & USE

PURSUANT TO REQUIREMENTS OF THE MUNICIPAL CODE OF THE CITY OF ANKENY, THE PROPERTY IDENTIFIED BELOW MAY BE LEGALLY USED IN THE MANNER DESCRIBED.

BUILDING ADDRESS: 1313 MAIN

LEGAL DESCRIPTION :

This certificate is issued pursuant to the requirements of the Municipal Code of the City of Ankeny and other applicable ordinances certifying that, at the time of issuance this structure is in compliance with the adopted construction codes and zoning ordinance for the use and work specified in the following permit.

Building Permit Number: BLD2006-00898

Type of Work: SFDWELLING

Permit Applicant: BUILDER

Use Classification: Single Family Residential

Zoning

Zones

Type of Construction

Design Occupant Load

Sprinkler System Provided

Sprinkler System Required

Property Owner

No change of use may be made at this location unless a new Certificate of Occupancy & Use is granted for such use and no change in this building may be made without first consulting the Community Development Department.

SPECIAL STIPULATIONS AND CONDITIONS

Jeff Jacker, Building & Zoning Administrator

Date

City of Ankeny Community Development Department - 220 West First Street - Ankeny, IA 50023-1751

Certificate of Occupancy

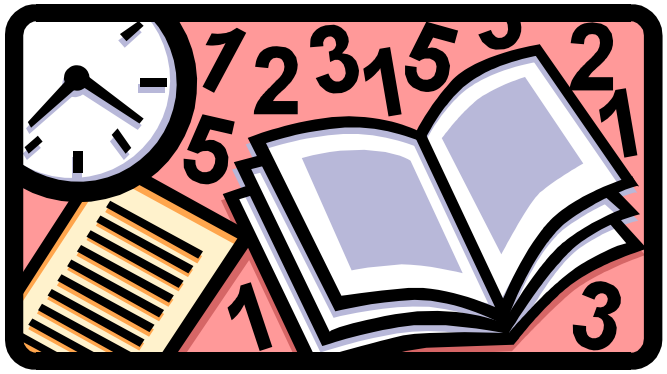
- Required prior to occupancy
  - Please allow time for the final inspection and any corrections to be made and re-inspected and confirmed and the C.O. to be processed.
    - **Same day CO issuance may not be accommodated.**

Cooperation, organization and communication!

General contractors are responsible for their projects and must coordinate site and inspection activities of all trades!

HELP US TO HELP YOU!

- Allow time for permit review, inspection scheduling, final inspections and C.O. Issuance!



HELP US TO HELP YOU!

- Be a good neighbor!
- Cooperation and organization are key elements!

Questions

In Closing

- Another construction season is again well underway.
- We hope this information, and in some cases gentle reminders, will help us keep things running smoothly.
- Please never hesitate to call - we are always more than happy to make ourselves available for discussion.

. . . and

Thank you for helping build the City of Ankeny